

# Drone Deliveries in Central Florida

## Update on Draft Environmental Assessment for Wing Aviation



# What Was Applied for...

- On December 19th the FAA provided notice that Wing Aviation is seeking approval to conduct drone deliveries in Central Florida through the dissemination of a Draft Environmental Assessment (EA).
- Wing is planning to operate drone deliveries from 4 Wal-Mart stores in Metro Orlando.
- Deliveries of up to 5 lbs. will take place within 6 miles of each store and all deliveries will be automated, without a human operator, and drones should not need to land at any point except at the drone nest.
- Feedback to the EA was due to the FAA on January 20<sup>th</sup>.



[https://www.faa.gov/uas/advanced\\_operations/nepa\\_and\\_drones](https://www.faa.gov/uas/advanced_operations/nepa_and_drones)



# Package Delivery Process – Section 2.2.2 of EA

- 1. Customer places an order and selects drone delivery.
- 2. Staff at the store prepare item for delivery and bring it to the loading area at the nest.
- 3. Drone is sent a predetermined route and gets clearance from Wing's system to start operations.
- 4. Drone lifts vertically to 23 ft. above ground level (AGL) and waits until package is loaded to end of tether.
- 5. Tether and package are reeled into the drone and the vehicle begins trip to delivery location. While in route drone will climb to cruising altitude of 150-300 ft. (AGL) and will travel around 59 miles per hour (MPH).



# Package Delivery Process Continued...

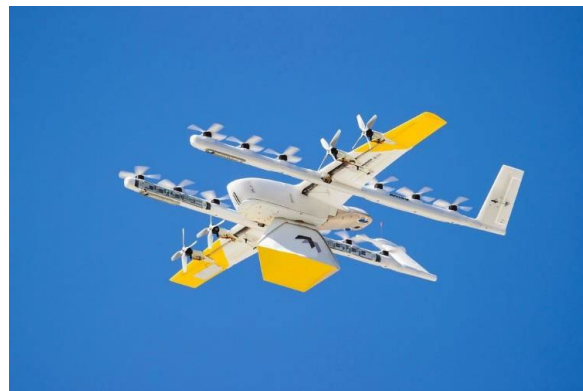


- 6. Drone will follow the predetermined route to delivery location.
- 7. As drone approaches delivery location it will descend ultimately hovering at 23 ft. (AGL) at delivery location.
- 8. Drone will lower the package to the customers property (yard, driveway etc.) via the built in tether, once package is on the ground the drone will release the package and reel in the tether.
- 9. Drone repeats the trip and altitude adjustments to return to the nest for the next delivery.



# Drone Details

Aircraft Model	Hummingbird 7000W-B	Hummingbird 8000W-A
Fleet Make Up	70-80%	20-30%
Size	4.3 ft. (L) 4.9 ft. (W) 1 ft. (H)	6.2 ft. (L) 6 ft. (W) 1 ft. (H)
Weight	11 lbs. (no payload) + 2.5 lbs. (max payload) < 15 lbs. Total	20 lbs. (no payload) + 5 lbs. (max payload) < 25 lbs. Total
Rotor Design	Multi-rotor design with 16 propellers	Multi-rotor design with 12 propellers



# Proposed Locations...

- Initial Locations: 4+ in Metro Orlando, all outside of city limits but delivery area is up to 6 miles from drone nest (droneport).
  - 8990 Turkey Lake Rd Orlando, FL 32819
  - 11250 E Colonial Dr Orlando, FL 32817
  - 1450 Johns Lake Rd, Clermont, FL 34711
  - 2855 N Old Lake Wilson Rd, Kissimmee, FL 34747
- Future Expansion: Seeking FAA Approval for up to 150 nest across CFL

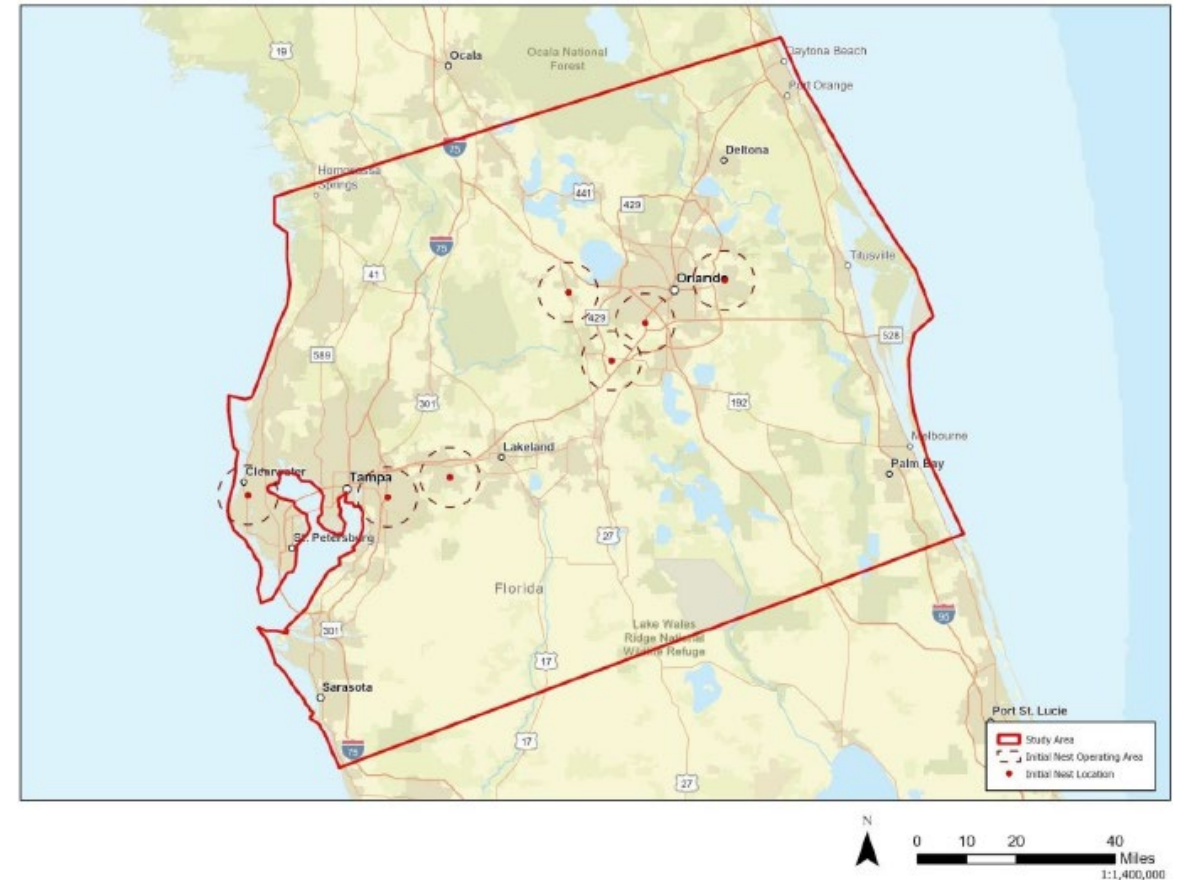


Figure 2.2-2. Wing's Proposed Central Florida Metro and Surrounding Area Initial Site Locations



# Drone Nest Details...

- Typically located in parking lot, close to other delivery service area.
- Fenced area with a shipping container for drone storage and generator for initial power delivery.
- City of Orlando expects to permit through a site plan determination or similar if accessory use.
- Will need building permit for fence and electrical permit for power connection.



8555 Preston Rd Frisco TX



# Regulatory Framework - Federal

- The federal government, through the FAA, has sole approval powers for the aircraft (drone) certification as well as the certification of the company as an “air carrier” under Part 135 Certification. ([FAA Package Delivery by Drone Summary](#))
- Wing Aviation has existing FAA, Part 135 approval to operate as an air carrier.
- Under current FAA rules the expansion of drone deliveries into Central Florida is a major federal action which requires the approval of an environmental assessment (EA).





# Regulatory Framework - State

- Drone operations within Florida are governed by Section 330.41 Unmanned Aircraft Systems Act of State Statute.
- Section 3 – Regulation – seats all authority to regulate the operation of unmanned aircraft systems to the State. Part 3(c) states that local jurisdictions “*may not withhold issuance of a business tax receipt, development permit, or other use approval to a drone delivery service or enact or enforce an ordinance or resolution that prohibits a drone delivery service’s operation based on the location of its drone port*”
- Generally, in relation to drones local jurisdictions can only enact or enforce local ordinances relating to nuisances, voyeurism, harassment, reckless endangerment, or property damage.



# Next Steps

- Wing Aviation is waiting for FAA response to EA with a goal to start operations in Central Florida in the 2<sup>nd</sup> half of 2025.

## Remaining Questions:

- Public Outreach Before Operations
- Emergency Procedures
- Company Point of Contact
  - Lines of Communication
  - Public City to Company
- FAA Remote ID Requirements
- Package Drop Off Locations



# Thank You!

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[orlando.gov/futureready](http://orlando.gov/futureready)